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Ophiostriatus sexradiatus, a New Species of Ophiuroidea
from the North Mariana Islands

By

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Abstract A new species of Ophiuroidea, *Ophiostriatus sexradiatus* from the North Mariana Islands, is described. New species is characterized by hexaradiated body and possession of five arm spines.

The North Mariana Expedition was carried out by the Natural Museum and Institute, Chiba, in cooperation with the Department of Natural Resources, the Commonwealth of the North Mariana Islands, and the University of Guam, during the period from May to June 1992.

The staff obtained 112 specimens of Ophiuroidea, among which two specimens have six arms, representing a new species.

I am indebted to Dr. A. ASAKURA, Natural History Museum and Institute, Chiba, for offering very interesting specimens for my study. The holotype is preserved in the Natural History Museum and Institute, Ciba and the paratype in the National Science Museum, Tokyo.

Family Ophiuridae LYMAN, 1865

Subfamily Ophioleucinae MATSUMOTO, 1915

Genus *Ophiostriatus* MADSEN, 1983

Ophiostriatus sexradiatus sp. nov.

(Figs. 1–2)

Material examined. **Holotype**, CBM-ZM-1 West coast of Agrihan Island, 40 m in depth, on coral; 29 May 1992. **Paratype**, NSMT-E1268, same data as the holotype.

Diagnosis. A species of *Ophiostriatus* with hexaradiate body. Disk densely covered with fine granules; arms slender; arm spines five in number; lateral and distal ventral arm plates ornamented with weak concentric striation; tentacle scales two in number at basal arm segments.

Description. The body is six radial symmetry. The disk is thin and hexagonal, ca. 6 mm in diameter, covered with small and thin scales in which the radial shields are inconspicuous. There are fine, spherical granules covering scales orally and aborally. The granules invade onto adoral shields, oral plates, and first lateral arm

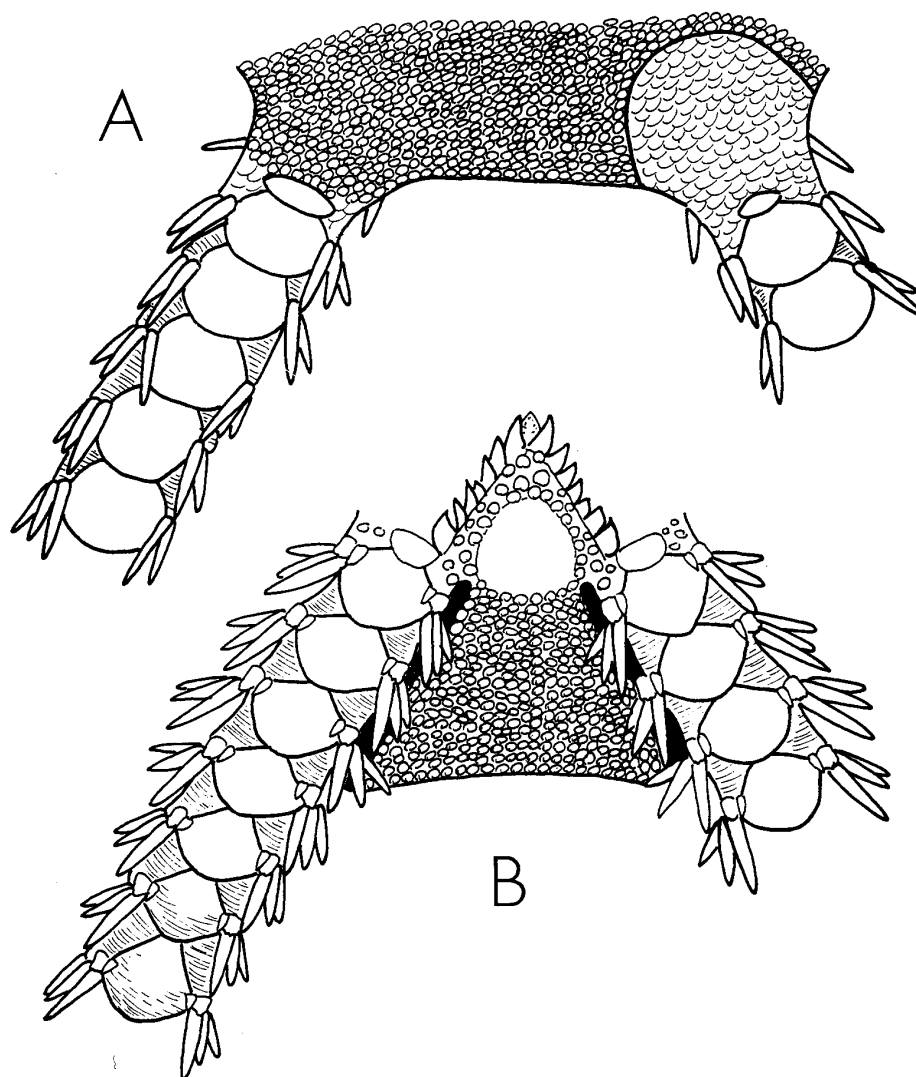


Fig. 1. *Ophiostriatus sexradiatus* sp. nov., holotype, A. Aboral view. B. Oral view.

plates, as well.

The oral shields are oval in shape with substraight distal margin, bordered by granules. The oral papillae are seven or eight in number, pointed at the tip.

The arms are slender. None of arms are preserved in complete condition, so it is impossible to measure the complete length of arms, but the longest one was broken at the point of 28 mm from the disk margin.

The first dorsal arm plate is small, wider than long. The following basal ones are round, as long as wide, with truncated proximal margin, contacted with each other. However, at the middle arm segments, they are slightly longer than wide.

The first ventral arm plates is small, with round distal margin and straight proximal margin. The following basal ones are rhombic, as long as wide, with truncated proximal margin and round distal margin. However, at the middle arm segments,

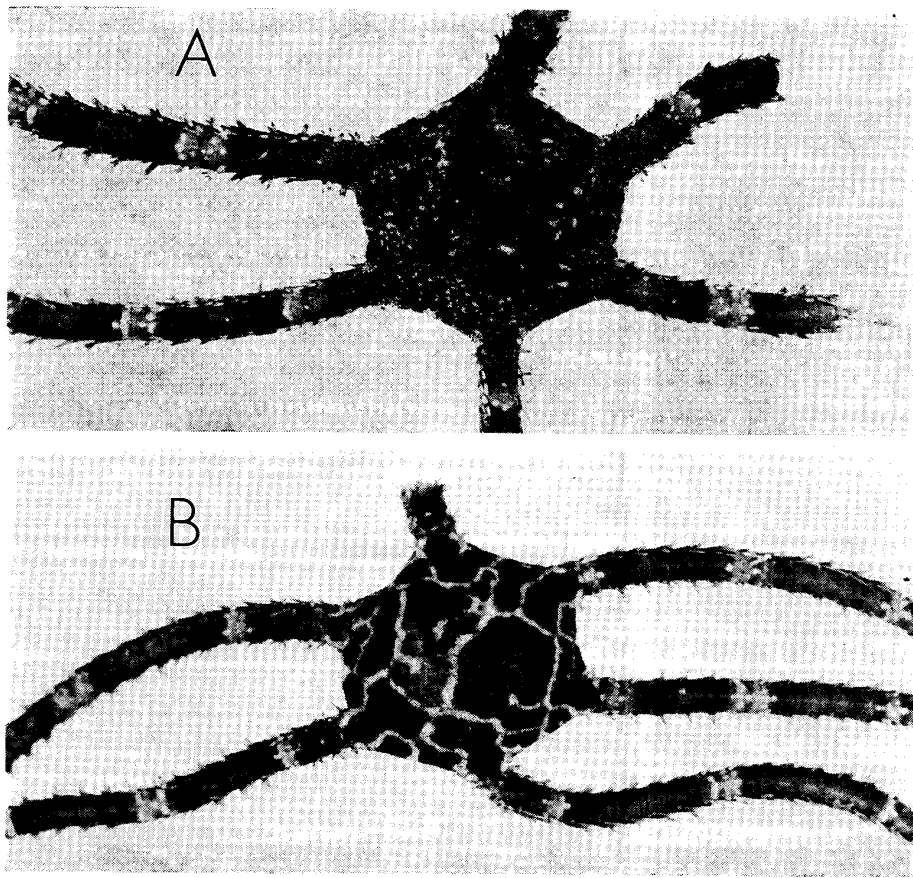


Fig. 2. *Ophiostriatus sexradiatus* sp. nov., A. Aboral view of holotype. B. Aboral view of paratype.

they are longer than wide, and separated from each other, having a weak concentric (transverse) striation distally.

All lateral arm plates have weak transverse striations. The arm spines are flat, acute at the tip, five in number, in which the oral- and aboralmost ones are slightly longer than the rest, as long as the length of corresponding arm segments.

The basal arm segments have two thin tentacle scales, the outer one is wide, rectangular or triangular in shape, while the inner one is elongate, acute at the tip. At the middle arm segments, the inner ones gradually diminish the size and eventually disappear.

Color: The disk and aboral side of the arms are dark brown, but there are small white patches dispersing on dorsal disk and dorsal arm plates. The arm spines annulated by light and dark bands.

Description of paratype: The disk diameter is ca. 6 mm. Color pattern differs from that of holotype, namely, yellow reticulation on dark disk being clear.

Remarks: MADSEN (1983) listed up three species belonging to the genus *Ophiostriatus* MADSEN, 1983, namely, *O. striatus* (MORTENSEN, 1933), *O. atlanticus* (MORTENSEN, 1933), and *O. bispinosus* (KOEHLER, 1897). But they have all five symmetrical

body, so this six radial species is clearly different from them. Besides, this species has five arm spines, in contrast to the other three species that have all two arm spines. All three known species have arm plates and tentacle scales that are ornamented with conspicuous concentric striations, but this new species has such striations on only lateral arm plates and ventral arm plates of the middle (possibly also distal) arm segments, but not on dorsal arm plates and tentacle scales.

In discovering this new species, the definition of the genus of *Ophistriatus* MADSEN, 1983 should be emended as follows. A genus of Ophioleucinae, with a disk having round margin and uniformly beset with granules orally and aborally. Sparser cover of granules on oral plates and adroal shields. From two to five arm spines on a raised arch of lateral arm plate. Tentacle scales one or two in number. Arm plates conspicuously ornamented with concentric striations wholly or partially.

Literature Cited

- KOEHLER, R., 1897. Echinodermes recueillis par l' "Investigator" dans l'Océan Indien. *Ann. Sci. nat., Zool.*, **8**: 277–372.
- MADSEN, F. J., 1983. A review of the Ophioleucinae stat. rev. (Echinodermata, Ophiuroidea) with the erection of a new genus, *Ophistriatus*. *Steenstrupia*, **9**: 29–69.
- MORTENSEN, Th., 1933 a. The Echinoderms of St. Helena (other than Crinoids). *Vid Med. dan. nat. Foren.* **93**: 401–472.
- 1933 b. Ophiuroidea. *Dan. Ingolf-Exped.*, **4** (8): 1–121.